

FEDERAL COMMUNICATIONS COMMISSION

[Reprinted from FEDERAL REGISTER of July 4, 1951]

Part 12—Rules Governing Amateur Radio Service

(Revised to June 6, 1951)

TITLE 47—TELECOMMUNICATION

Chapter I—Federal Communications Commission

PART 12—RULES GOVERNING AMATEUR RADIO SERVICE

RECAPITULATION OF REGULATIONS

Because of the number of outstanding amendments to Part 12 since it was last recapitulated in the FEDERAL REGISTER (April 17, 1946, 11 F. R. 4240) there follows a recapitulation of Part 12 as revised to and including the Commission's action of June 6, 1951.

FEDERAL COMMUNICATIONS COMMISSION,

[SEAL] T. J. SLOWIE,
Secretary.

- Sec.
12.0 Basis and Purpose.
- DEFINITIONS
- 12.1 Amateur service.
12.2 Amateur operator.
12.3 Amateur station.
12.4 Amateur portable station.
12.5 Amateur mobile station.
12.6 Amateur radio communication.
12.7 Remote control.
12.9 Antenna structure defined.
12.10 Aircraft landing area defined.
- AMATEUR OPERATORS
LICENSES; PRIVILEGES
- 12.20 Classes of amateur operator licenses.
12.21 Eligibility for license.
12.22 Application for amateur operator license.
12.23 Classes and privileges of amateur operator licenses.
12.25 Availability of operator license.
12.26 Duplicate license.
12.27 Renewal of amateur operator license.
12.28 Who may operate an amateur station.
12.29 License term.
12.30 Order of suspension.
12.31 Proceedings.
- EXAMINATIONS
- 12.41 When examination is required.
12.42 Examination elements.
12.43 Examination requirements.
12.44 Manner of conducting examination.
12.45 Additional examination for holders of Conditional Class operator licenses.
12.46 Examination credit.
12.47 Examination procedure.
12.48 Grading.
12.49 Eligibility for reexamination.
12.50 Code Test procedure.
- AMATEUR RADIO STATIONS
LICENSES
- 12.60 Limitations on antenna structures.
12.61 Eligibility for amateur station license.

- Sec.
12.62 Eligibility of corporations or organizations to hold license.
12.63 Application for amateur station license.
12.64 Location of station.
12.65 License period.
12.66 Authorized apparatus.
12.67 Renewal of amateur station license.
12.68 Availability of station license.
12.69 Revocation of station license.
12.70 Modification of station license.

CALL SIGNS

- 12.81 Assignment of call signs.
12.82 Transmissions of call signs.

PORTABLE AND MOBILE STATIONS

- 12.91 Requirements for portable and mobile operation.
12.93 Special provisions for nonportable stations.
12.94 Special provisions for mobile stations aboard ships or aircraft.

USE OF AMATEUR STATIONS

- 12.101 Points of communications.
12.102 No remuneration for use of station.
12.103 Broadcasting prohibited.
12.104 Radiotelephone tests.
12.105 Codes and ciphers prohibited.
12.106 One-way communications.

ALLOCATION OF FREQUENCIES

- 12.111 Frequencies and types of emission for use of amateur stations.
12.113 Individual frequency not specified.
12.114 Types of emission.

EQUIPMENT AND OPERATION

- 12.131 Maximum authorized power.
12.132 Power supply to transmitter.
12.133 Purity and stability of emissions.
12.134 Modulation of carrier wave.
12.135 Frequency measurement and regular check.
12.136 Logs.
12.137 Retention of logs.

SPECIAL CONDITIONS

- 12.151 Additional conditions to be observed by licensee.
12.152 Restricted operation.
12.153 Second notice of same violation.
12.154 Third notice of same violation.
12.155 Answers to notices of violations.
12.156 Operation in emergencies.
12.157 Obscenity, indecency, profanity.
12.158 False signals.
12.159 Unidentified communications.
12.160 Interference.
12.161 Damage to apparatus.
12.162 Fraudulent licenses.

APPENDIX

- Examination points.
Radio districts.
Extracts from General Radio Regulations (Cairo Revision).
Extracts from Radio Regulations (Atlantic City, 1947).

AUTHORITY: §§ 12.0 to 12.162 issued under sec. 4, 48 Stat. 1066, as amended; 47 U. S. C.

154. Interpret or apply. sec. 303, 48 Stat. 1082, as amended; 47 U. S. C. 303.

§ 12.0 *Basis and purpose.* The rules and regulations in this part are designed to provide an amateur radio service having a fundamental purpose as expressed in the following principles:

(a) Recognition and enhancement of the value of the amateur service to the public as a voluntary noncommercial communication service, particularly with respect to providing emergency communications.

(b) Continuation and extension of the amateur's proven ability to contribute to the advancement of the radio art.

(c) Encouragement and improvement of the amateur radio service through rules which provide for advancing skills in both the communication and technical phases of the art.

(d) Expansion of the existing reservoir within the amateur radio service of trained operators, technicians, and electronics experts.

(e) Continuation and extension of the amateur's unique ability to enhance international good will.

DEFINITIONS

§ 12.1 *Amateur service.* The term "amateur service" means a radio service carried on by amateur stations.

§ 12.2 *Amateur operator.* The term "amateur operator" means a person interested in radio technique solely with a personal aim and without pecuniary interest, holding a valid license issued by the Federal Communications Commission authorizing him to operate licensed amateur stations.

§ 12.3 *Amateur station.* The term "amateur station" means a station used by an amateur operator, and it embraces all radio transmitting apparatus at a particular location used for amateur service and operated under a single instrument of authorization.

§ 12.4 *Amateur portable station.* The term "amateur portable station" means an amateur station that is so constructed that it may conveniently be moved about from place to place for communication, but which is not operated while in motion.

§ 12.5 *Amateur mobile station.* The term "amateur mobile station" means an amateur station that is so constructed that it may conveniently be transferred to or from a mobile unit or from one such unit to another, and is ordinarily used while such mobile unit is in motion.

§ 12.6 *Amateur radio communication.* The term "amateur radio communication" means radio communication between amateur stations solely with a personal aim and without pecuniary interest.

§ 12.7 *Remote control.* The term "remote control" as applied to the amateur radio service, means control of transmitting equipment of an amateur station from an operating position other than one at which the transmitter is in view and immediately accessible; except that, direct mechanical control or direct electrical control by wired connections of an amateur transmitter from a point located on board any aircraft, vessel or vehicle on which such transmitter is located shall not be considered remote control within the meaning of this definition.

§ 12.9 *Antenna structure defined.* The term "antenna structure" includes the radiating system and its supporting structures.

§ 12.10 *Aircraft landing area defined.* An aircraft landing area means any locality, either on land or water, including airports and intermediate landing fields, which is used, or approved for use, for landing and take-off of aircraft whether or not facilities are provided for the shelter, servicing, or repair of aircraft, or for the receiving or discharging of passengers or cargo.

AMATEUR OPERATORS LICENSES, PRIVILEGES

§ 12.20 *Classes of amateur operator licenses.*

Amateur extra, class.¹

Advanced class² (previously class A).

General class³ (previously class B).

Conditional class³ (previously class C).

Technician class.⁴

Novice class.⁴

§ 12.21 *Eligibility for license.*⁵ Persons are eligible to apply for the various classes of amateur operator licenses as follows:

(a) *Amateur extra class.* Any citizen of the United States who at any time prior to receipt of his application by the Commission has held for a period of two years or more a valid amateur operator license issued by the Federal Communications Commission, excluding licenses of the Novice and Technician Classes.

(b) *Advanced class.* Any citizen of the United States who at any time prior to receipt of his application by the Commission, has held for a period of a year or more an amateur operator license is-

¹ This class of operator license will become available to qualified applicants January 1, 1952.

² This class of license is the same as the Class A with change of name only. It (and the Class A) may be renewed as long as the holder to whom it was issued meets the renewal requirements current at the time renewal is applied for. New Advanced Class (or Class A) amateur operator licenses will not be issued after December 31, 1952.

³ This class of operator license will become effective March 1, 1951.

⁴ This class of license will become available to qualified applicants July 1, 1951.

⁵ For effective dates of the various classes of operator licenses, see footnotes 1 through 4.

sued by the Federal Communications Commission, excluding licenses of the Novice and Technician Classes. New Advanced Class amateur operator licenses will not be issued after December 31, 1952. However, Advanced Class (or Class A) licenses may continue to be renewed as set forth in § 12.27.

(c) *General class.* Any citizen of the United States.

(d) *Conditional class.* Any citizen of the United States whose actual residence and amateur station location are more than 125 miles air line distant from the nearest location at which examinations are held at intervals of not more than 3 months for General Class amateur operator license; or who is shown by physician's certificate to be unable to appear for examination because of protracted disability; or who is shown by certificate of the commanding officer to be in the armed forces of the United States at an Army, Navy, Air Force or Coast Guard station and, for that reason, to be unable to appear for examination at the time and place designated by the Commission.

(e) *Technician class.* Any citizen of the United States.

(f) *Novice class.* Any citizen of the United States except a former holder of an amateur license of any class issued by any agency of the United States government, military or civilian.

§ 12.22 *Application for amateur operator license.* The application for any new amateur operator license, including application for any change in operating privileges, shall be submitted in person or by mail to the district field office of the Commission at which the applicant desires his application to be considered and acted upon, which office will make the final arrangements for conducting any required examination. If the application is for a license which is obtained upon successful completion of an examination by volunteer examiners under the special provisions of § 12.44 (c), the application shall be submitted to the district field office which supplied the examination material. Applications for renewal or modification of license, or for duplicate license, when no change in operating privileges is involved, shall be filed directly with the Commission at its Washington 25, D. C. office.

§ 12.23 *Classes and privileges of amateur operator licenses.*⁶—(a) *Amateur extra class.* All authorized amateur privileges including such additional privileges in both communication and technical phases of the art which the Commission may consider as appropriately limited to holders of this class of license.

(b) *Advanced class.* All amateur privileges except those which may be reserved to holders of the Amateur Extra Class license.

(c) *General and conditional classes.* All authorized amateur privileges except the use of radiotelephony on the frequency bands 3800 to 4000 kilocycles, and 14200 to 14300 kilocycles, and except those which may be reserved to holders of the Amateur Extra Class license.

(d) *Technician class.* All authorized

amateur privileges in the amateur frequency bands above 220 megacycles.

(e) *Novice class.* Those amateur privileges as designated and limited as follows:

(1) The d. c. plate power input to the vacuum tube or tubes supplying power to the antenna shall not exceed 75 watts.

(2) Only the following frequency bands and types of emission may be used, and the emissions of the transmitter must be crystal-controlled:

(i) 3700 to 3750 kilocycles, radiotelegraphy using only type A1 emission in accordance with the geographical restrictions set forth in § 12.111 (a) (2) (i).

(ii) 26.960 to 27.230 Mc., radiotelegraphy using only type A1 emission.

(iii) 145 to 147 megacycles, radiotelegraphy or radiotelephony using any type of emission except pulsed emissions and type B emission.

§ 12.25 *Availability of operator license.* The original operator license of each operator shall be kept in the personal possession of the operator while operating an amateur station. When operating an amateur station at a fixed location, however, the license may be posted in a conspicuous place in the room occupied by the operator. The license shall be available for inspection by any authorized Government official whenever the operator is operating an amateur station and at other times upon request made by an authorized representative of the Commission, except when such license has been filed with application for modification or renewal thereof, or has been mutilated, lost or destroyed, and application has been made for a duplicate license in accordance with § 12.26. No recognition shall be accorded to any photocopy of an operator license; however, nothing in this section shall be construed to prohibit the photocopying, for other purposes, of any amateur radio operator license.

§ 12.26 *Duplicate license.* Any licensee applying for a duplicate license to replace an original which has been lost, mutilated, or destroyed, shall submit with the application the mutilated license or a statement setting forth the facts regarding the manner in which the original license was lost or destroyed. If, subsequent to receipt by the licensee of the duplicate license, the original license is found, either the duplicate or the original license shall be returned immediately to the Commission.

§ 12.27 *Renewal of amateur operator license.*⁷ (a) An amateur operator li-

⁶ By order dated and effective November 13, 1950, the Commission temporarily waived, to a limited extent, the requirement that all applications for renewal of an amateur operator license be accompanied by a showing that the applicant actually operated an amateur radio station or stations, in the manner and upon the occasions or for the period of time specified in section 12.27, in cases where it is shown that the applicant was unable to conduct such operation because he was on active duty in the armed forces of the United States. This order is applicable to all amateur operator licenses which expire during the period January 1 to December 31, 1951, inclusive.

cense except the Novice Class, may be renewed upon proper application in which it is stated that the applicant has lawfully accumulated, at an amateur station licensed by the Commission, a minimum total of either 2 hours operating time during the last 3 months or 5 hours operating time during the last 12 months of the license term. Such operating time, for the purpose of renewal, shall be counted as the total of all that time between the entries in the station log showing the beginning and end of transmissions as required in § 12.136 (a), both during single transmissions and during a sequence of transmissions. The application shall, in addition to the foregoing, include a statement that the applicant can send by hand key, i. e., straight key or any other type of hand operated key such as a semi-automatic or electronic key, and receive by ear, in plain language, messages in the International Morse Code at a speed of not less than that which is required in qualifying for an original license of the class being renewed.

(b) The Novice Class license will not be renewed.

(c) The applicant shall qualify for a new license by examination if the requirements of this section are not fulfilled.

(d) The renewal application shall be accompanied by the applicant's amateur operator license, and also by his amateur station license if he holds one.

(e) Application for renewal of an amateur operator license may be filed not earlier than 120 days prior to the date of expiration and not later than a period of grace of one year after such date of expiration. During this one year period of grace an expired license is not valid. A renewed license issued upon the basis of an application filed during the grace period will be dated currently and will not be back-dated to the date of expiration of the license being renewed.

(f) Renewal applications shall be governed by applicable rules in force on the date when application is filed.

§ 12.28 *Who may operate an amateur station.* An amateur radio station may be operated only by a person holding a valid amateur operator license. Such station may be operated by the licensee only in the manner and to the extent provided in his amateur operator license. Persons other than the station licensee, when operating such station, may operate it only to the extent and in the manner authorized to the licensee of the station and not exceeding the operating authority of such person's own amateur operator license. When an amateur station is used for telephony, the station licensee may permit any person to transmit by voice, provided during such transmission call signs are announced as prescribed by § 12.82 and a duly licensed amateur operator maintains actual control over the emissions, including turning the carrier on and off for each transmission and signing the station off after communication with each station has been completed.

§ 12.29 *License term.* Amateur operator licenses are normally valid for a period of 5 years from the date of issuance of a new or renewed license, except the Novice Class which is normally valid for a period of 1 year from the date of issuance. Modified and duplicate licenses shall bear the same date of expiration as the licenses for which they are modifications or duplicates.

§ 12.30 *Order of suspension.* No order of suspension of any operator's license shall take effect until 15 days' notice in writing thereof, stating the cause for the proposed suspension, has been given to the operator licensee who may make written application to the Commission at any time within said 15 days for a hearing upon such order. The notice to the operator licensee shall not be effective until actually received by him, and from that time he shall have 15 days in which to mail the said application. In the event that physical conditions prevent mailing of the application at the expiration of the 15-day period, the application shall then be mailed as soon as possible thereafter, accompanied by a satisfactory explanation of the delay. Upon receipt by the Commission of such application for hearing, said order of suspension shall be held in abeyance until the conclusion of the hearing which shall be conducted under such rules as the Commission shall deem appropriate. Upon the conclusion of said hearing the Commission may affirm, modify, or revoke said order of suspension.

§ 12.31 *Proceedings.* Proceedings for the suspension of an operator's license shall in all cases be initiated by the entry of an order of suspension. Respondent will be given notice thereof together with notice of his right to be heard and to contest the proceeding. The effective date of the suspension will not be specified in the original order but will be fixed by subsequent motion of the Commission in accordance with the conditions specified above. Notice of the effective date of suspension will be given respondent, who shall send his operator license to the office of the Commission in Washington, D. C., on or before the said effective date, or, if the effective date has passed at the time notice is received, the license shall be sent to the Commission forthwith.

EXAMINATIONS

§ 12.41 *When examination is required.* Examination is required for the issuance of a new amateur operator license, and for a change in class of operating privileges. Credit may be given, however, for certain elements of examination as provided in § 12.46.

§ 12.42 *Examination elements.* Examinations for amateur operator privileges will comprise one or more of the following examination elements:

Element 1 (A): *Beginner's code test.* Code test at five (5) words per minute.

Element 1 (B): *General code test.* Code test at thirteen (13) words per minute.

Element 1 (C): *Expert's code test.* Code test at twenty (20) words per minute.

Element 2: *Basic amateur practice.* Amateur radio operation and apparatus, including radiotelephone and radiotelegraph.

Element 3 (A): *Basic law.* Rules and regulations essential to beginners' operation, including sufficient elementary radio theory for the understanding of those rules.

Element 3 (B): *General regulations.* Provisions of treaties, statutes, and rules and regulations affecting all amateur stations and operators.

Element 4 (A): *Advanced radiotelephone.* Technical, operational and other matter specifically applicable to the operation of amateur radiotelephone stations.

Element 4 (B): *Advanced amateur practice.* Advanced radio theory and operation as applicable to modern amateur techniques, including, but not limited to, radiotelephony, radiotelegraphy, and transmissions of energy for measurements and observations applied to propagation, for the radio control of remote objects and for similar experimental purposes.

§ 12.43 *Examination requirements.* Applicants for original licenses will be required to pass examinations as follows:

(a) *Amateur extra class.* Elements 1 (C), 2, 3 (B) and 4 (B).

(b) *Advanced class.* Elements 1 (B), 2, 3 (B) and 4 (A).

(c) *General class.* Elements 1 (B), 2 and 3 (B).

(d) *Conditional class.* Elements 1 (B), 2 and 3 (B).

(e) *Technician class.* Elements 1 (A), 2 and 3 (B).

(f) *Novice class.* Elements 1 (A) and 3 (A).

§ 12.44 *Manner of conducting examinations.* (a) The examinations for all classes of amateur operator licenses, except Conditional Class, will be conducted by an authorized Commission employee or representative at locations and at times specified by the Commission. The examinations for Conditional Class, as well as Technician and Novice Class licenses, may be conducted in accordance with the provisions of paragraph (c) of this section under one or more of the following conditions:

(1) If the applicant's actual residence and proposed amateur station location are more than 125 miles airline distance from the nearest location at which examinations are conducted by an authorized Commission employee or representative at intervals of not more than 3 months for amateur operator licenses; or

(2) If the applicant is shown by physician's certificate to be unable to appear for examination because of protracted disability; or

(3) If the applicant is shown by certificate of the commanding officer to be in the armed forces of the United States at an Army, Navy, Air Force, or Coast Guard station and, for that reason, to be unable to appear for examination at the time and place designated by the Commission.

(b) A holder of a technician or Novice Class license obtained on the basis of an examination under the provisions of paragraph (c) of this section is not required to be re-examined when changing residence and station location to within a regular examination area, nor when a new examination location is established within 125 miles of such licensee's residence and station location.

(c) Each examination for Conditional Class license, or for Technician, or Novice Class license under special conditions

set forth in paragraph (a) of this section, shall be conducted and supervised by not more than two volunteer examiners, whom the Commission may designate or permit the applicant to select (not more than one examiner for the code test and not more than one examiner for the complete written examination). In the event the examiner for the code test is selected by the applicant, such examiner shall be the holder of an Extra Class, Advanced Class, or General Class of amateur operator license or shall have held, within the 5 years prior to the date of the examination, a commercial radiotelegraph operator license issued by the Commission or within that time shall have been employed in the service of the United States as the operator of a manually operated radiotelegraph station. The examiner for the written test shall be at least 21 years of age.

§ 12.45 *Additional examination for holders of Conditional Class operator licenses.* (a) The Commission may require a licensee holding a Conditional Class of operator license to appear for a General Class license examination at a location designated by the Commission. If the licensee fails to appear for the General Class examination when directed to do so, or fails to pass such examination, the Conditional Class operator license previously issued shall be subject to cancellation and, upon cancellation, a new license will not be issued for the Conditional Class privileges.

(b) Whenever the holder of a Conditional Class amateur operator license changes his actual residence or station location to a location where he would not have been eligible to apply for a Conditional Class license in the first instance, or whenever a new examining location is established in an area within which the holder of a Conditional Class amateur operator license would not have been eligible because of such examination location, to apply for a Conditional Class license such holder of Conditional Class license shall appear within 4 months thereafter at an examining location and time designated by the Commission and be examined for a General Class license. If, under such circumstances, the licensee fails to appear for the General Class examination, or fails to pass such examination, the Conditional Class license previously issued shall be subject to cancellation and, upon cancellation, a new license will not be issued for the Conditional Class privileges.

§ 12.46 *Examination credit.* (a) An applicant for a higher class of amateur operator license who holds a valid amateur operator license issued upon the basis of an examination by the Commission will be required to pass only those elements of the higher class examination that were not included in the examination for the amateur license held when such application was filed. However, credit will not be allowed for licenses issued on the basis of an examination given under the provisions of § 12.44 (c).

(b) An applicant for Amateur Advanced Class operator license will be given credit for examination element 4 (A) if within 2 years prior to the receipt

of his application by the Commission he held Class A privileges or an Advanced Class license.

(c) An applicant for any class of amateur operator license, except the Extra Class, will be given credit for the telegraph code element if within 5 years prior to the receipt of his application by the Commission he held a commercial radiotelegraph first or second class operator license issued by the Federal Communications Commission.

(d) No examination credit, except as herein provided, shall be allowed on the basis of holding or having held any amateur or commercial operator license.

§ 12.47 *Examination procedure.* All written portions of the examinations for amateur operator privileges shall be completed by the applicant in legible handwriting or hand printing, and diagrams shall be drawn by hand, by means of either pen and ink or pencil. Whenever the applicant's signature is required, his normal signature shall be used. Applicants unable to comply with these requirements, because of physical disability, may dictate their answers to the examination questions and the receiving code test and if unable to draw required diagrams, may dictate a detailed description essentially equivalent. If the examination or any part thereof is dictated, the examiner shall certify the nature of the applicant's disability and the name and address of the person(s) taking and transcribing the applicant's dictation.

§ 12.48 *Grading.* (a) Code tests are graded as "passed" or "failed," separately for sending and receiving tests. Failure to pass the required code test for either sending or receiving will terminate the examination.

(b) Seventy-four percent is the passing grade for written examinations. For the purpose of grading, all elements, other than elements 4 (A) and 4 (B), required in qualifying for a particular license will be considered a single examination, and elements 4 (A) and 4 (B), will be considered as separate examinations.

§ 12.49 *Eligibility for re-examination.* An applicant who fails examination for amateur operator privileges may not take another examination for such privileges within 30 days, except that this limitation shall not apply to an examination for a General Class license following an examination for a Conditional Class license.

§ 12.50 *Code test procedure.* The code test required of an applicant for amateur radio operator license, in accordance with the provisions of §§ 12.42 and 12.43, shall determine the applicant's ability to transmit by hand key (straight key or if supplied by the applicant, any other type of hand operated key such as a semi-automatic or electronic key) and to receive by ear, in plain language, messages in the International Morse Code at not less than the prescribed speed, free from omission or other error for a continuous period of at least 1 minute during a test period of 5 minutes, counting five characters to the word, each

numeral or punctuation mark counting as two characters.

AMATEUR RADIO STATIONS

LICENSES

§ 12.60 *Limitation on antenna structures.* (a) No new antenna structure shall be erected for use by any station in the Amateur Radio Service, and no change shall be made in any existing antenna structure used or intended to be used by any station in the Amateur Radio Service so as to increase its overall height above ground level, without prior approval by the Commission, in any case when either (1) the antenna structure proposed to be erected will exceed an over-all height of 170 feet above ground level, except in the case where the antenna is mounted on top of an existing man-made structure and does not increase the over-all height of such man-made structure by more than 20 feet, or (2) the antenna structure proposed to be erected will exceed an over-all height of one foot above the established elevation of any landing area for each 200 feet of distance, or fraction thereof, from the nearest boundary of such landing area, except in the case where the antenna structure does not exceed 20 feet above the ground or is mounted on top of an existing man-made structure or natural formation and does not increase the over-all height of such man-made structure or natural formation by more than 20 feet as a result of such mounting. Application for Commission approval, when such approval is required, shall be submitted on FCC Form No. 401-A, in triplicate.

(b) In cases where FCC Form No. 401-A is required to be filed, further details as to whether an aeronautical study and/or obstruction marking may be required, and specifications for obstruction marking when required, may be obtained from Part 17 of this chapter, "Rules Concerning the Construction, Marking, and Lighting of Antenna Towers and Supporting Structures." Information regarding requirements as to inspection of obstruction marking, recording of information regarding such inspection, and maintenance of antenna structures is also contained in Part 17.

§ 12.61 *Eligibility for amateur station license.* A license for an amateur station will be issued in response to proper application therefor to a licensed amateur operator who has made a satisfactory showing of control of the transmitting station for which license is desired and of control of the specific premises upon which all of the station apparatus is to be located, at a designated fixed location. An amateur station license may be issued to an individual, not a licensed amateur operator (other than an alien or a representative of an alien or of a foreign government), who is in charge of a proposed amateur station located in approved public quarters and established for training purposes in connection with the armed forces of the United States, but not operated by the United States Government.

§ 12.62 *Eligibility of corporations or organizations to hold license.* An ama-

teur station license will not be issued to a school, company, corporation, association, or other organization, nor for its use, except that in the case of a bona fide amateur radio organization or society, a station license may be issued to a licensed amateur operator, other than the holder of a Novice Class license, as trustee for such society.

§ 12.63 *Application for amateur station license.* (a) Each application for an amateur station license shall comply with the Commission's rules and regulations and shall be made in writing, subscribed and verified on FCC Form No. 610 (application for amateur operator and/or station license). FCC Form No. 602 should be used where the applicant is in charge of a proposed amateur station located in approved public quarters and established for training purposes in connection with the armed forces of the United States, but not operated by the United States Government.

(b) One application and all papers incorporated therein and made a part thereof shall be submitted for each amateur station license. If the application is for station license only, it shall be filed directly with the Commission at its Washington 25, D. C., office. If the application also contains application for any class of amateur operator license, it shall be filed in accordance with the provisions of § 12.22.

§ 12.64 *Location of station.* (a) Every amateur station shall have a fixed transmitter location. Only one fixed transmitter location will be authorized and will be designated on the license for each amateur station, except that when remote control is authorized, the location of the remote control position as well as the location of the remotely controlled transmitter shall be considered as fixed transmitter locations and will be so designated on the station license. Unless remote control of the transmitting apparatus is authorized, such apparatus shall be operated only by a duly licensed amateur radio operator present at the location of such apparatus.

(b) Authority for operation of an amateur station with the licensed operator on duty at a specific remote control point in lieu of the remote transmitter location may be granted upon filing an application for a modified station license on FCC Form No. 610 or FCC Form No. 602, as appropriate, and provided that the following conditions are met:

(1) The remote control point as well as the remotely controlled transmitter, shall be located on premises controlled by the licensee.

(2) The remotely controlled transmitter shall be so installed and protected that it is inaccessible to other than duly authorized persons.

(3) In addition to the requirements of § 12.68 a photocopy of the amateur station license shall be posted in a conspicuous place at the location of the remotely controlled transmitter.

(4) Means shall be provided at the control point to permit the continuous monitoring of the emissions of the remotely controlled transmitter, and it

shall be continuously monitored when in operation.

(5) Means shall be provided at the remote control point immediately to suspend the radiation of the transmitter when there is any deviation from the terms of the station license or from the Rules Governing Amateur Radio Service.

(6) In the event that operation of an amateur transmitter from a remote control point by radio is desired, an application for a modified station license on FCC Form No. 610 or FCC Form No. 602, as appropriate, should be submitted with a letter requesting authority to operate in such a manner stating that the controlling transmitter at the remote location will operate within amateur frequency bands 420 megacycles or higher and that there will be full compliance with § 12.64 (b), subparagraphs (1) through (5). Supplemental statements and diagrams should accompany the application and show how radio remote control will be accomplished and what means will be employed to prevent unauthorized operation of the transmitter by signals other than those from the controlling unit. There should be included complete data on control channels, relays and functions of each, directional antenna design for the transmitter and receiver in the control circuit, and means employed for turning on and off the main transmitter from the remote control location.

(c) An amateur transmitter may be operated from a remote control point in lieu of the remote transmitter location without special authorization by the Commission when there is direct mechanical control or direct electrical control by wired connections of the transmitter from a point located in the same or closely adjoining building or structure provided there is full compliance with the conditions set forth in § 12.64 (b), subparagraphs (1) through (5).

§ 12.65 *License period.* The license for an amateur station is normally valid for a period of 5 years from the date of issuance of a new or renewed license except that an amateur station license issued to the holder of a Novice Class amateur operator license is normally valid for a period of 1 year from the date of issuance. Any modified or duplicate license shall bear the same expiration date as the license for which it is a modification or duplicate.

§ 12.66 *Authorized apparatus.* An amateur station license authorizes the use under control of the licensee of all transmitting apparatus at the fixed location specified in the station license which is operated on any frequency, or frequencies allocated to the amateur service, and in addition authorizes the use, under control of the licensee, of portable and mobile transmitting apparatus operated at other locations.

§ 12.67 *Renewal of amateur station license.* (a) An amateur station license may be renewed upon proper application filed not earlier than 120 days prior to the date of expiration and not later than a period of grace of one year after such date of expiration. During this one

year period of grace an expired license is not valid. A renewed license issued upon the basis of an application filed during the grace period will be dated currently and will not be back-dated to the date of expiration of the license being renewed. This one year period of grace shall apply only to licenses expiring on or after January 1, 1951.

(b) The renewal application shall be accompanied by the applicant's amateur station license, and also by his amateur operator license if he holds one.

(c) Renewal applications shall be governed by applicable rules in force on the date when application is filed.

§ 12.68 *Availability of station license.* The original license of each amateur station or a photocopy thereof shall be posted in a conspicuous place in the room occupied by the licensed operator while the station is being operated at a fixed location or shall be kept in his personal possession. When the station is operated at other than a fixed location, the original station license or a photocopy thereof shall be kept in the personal possession of the station licensee (or a licensed representative) who shall be present at the station while it is being operated as a portable or mobile station. The original station license shall be available for inspection by any authorized Government official at all times while the station is being operated and at other times upon request made by an authorized representative of the Commission, except when such license has been filed with application for modification or renewal thereof, or has been mutilated, lost, or destroyed, and application has been made for a duplicate license in accordance with § 12.26.

§ 12.69 *Revocation of station license.* Whenever the Commission shall institute a revocation proceeding against the holder of any radio station license under section 312 (a) of the Communications Act of 1934, as amended, it shall initiate said proceeding by serving upon said licensee an order of revocation effective not less than 15 days after written notice thereof is given the licensee. The order of revocation shall contain a statement of the grounds and reasons for such proposed revocation and a notice of the licensee's right to be heard by filing with the Commission a written request for hearing within 15 days after receipt of said order. Upon filing of such written request for hearing by said licensee the order of revocation shall stand suspended and the Commission will set a time and place for hearing and shall give the licensee and other interested parties notice thereof. If no request for hearing on any order of revocation is made by the licensee against whom such an order is directed within the time hereinabove set forth, the order of revocation shall become final and effective, without further action of the Commission. When any order of revocation has become final, the person whose license has been revoked shall forthwith deliver the station license in question to the Engineer in Charge of the district in which the licensee resides.

§ 12.70 Modification of station license.

(a) Whenever the Commission shall determine that public interest, convenience, and necessity would be served, or any treaty ratified by the United States will be more fully complied with, by the modification of any radio station license either for a limited time, or for the duration of the term thereof, it shall issue an order for such licensee to show cause why such license should not be modified.

(b) Such order to show cause shall contain a statement of the grounds and reasons for such proposed modification, and shall specify wherein the said license is required to be modified. It shall require the licensee against whom it is directed to be and appear at a place and time therein named, in no event to be less than 30 days from the date of receipt of the order to show cause why the proposed modification should not be made and the order of modification issued.

(c) If the licensee against whom the order to show cause is directed does not appear at the time and place provided in said order, a final order of modification shall issue forthwith.

CALL SIGNS

§ 12.81 Assignment of call sign. (a)

The call signs of amateur stations will be assigned systematically by the Commission with the following exceptions:

(1) A specific unassigned call sign may be reassigned to the most recent holder thereof;

(2) A specific unassigned call sign may be assigned to a previous holder if not under license during the past 5 years;

(3) A specific unassigned call sign may be assigned to an amateur organization in memoriam to a deceased member and former holder thereof;

(4) A specific call sign may be temporarily assigned to a station connected with an event, or events, of general public interest;

(5) An unassigned "two-letter call sign" (a call sign having two letters following the numeral) may be assigned to a previous holder of a two-letter call sign the prefix of which consisted of not more than a single letter.

(b) An amateur call sign will consist of a sequence of one or two letters, a numeral designating the call sign area, and two or three letters. The call sign areas are as follows:

1. Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut.
2. New York, New Jersey.
3. Pennsylvania, Delaware, Maryland, District of Columbia.
4. Virginia, North and South Carolina, Georgia, Florida, Alabama, Tennessee, Kentucky, Puerto Rico and Virgin Islands.
5. Mississippi, Louisiana, Arkansas, Oklahoma, Texas, New Mexico.
6. California, Hawaii and Pacific possessions except those included in area 7.
7. Oregon, Washington, Idaho, Montana, Wyoming, Arizona, Nevada, Utah, Alaska and adjacent islands.
8. Michigan, Ohio, West Virginia.
9. Wisconsin, Illinois, Indiana.
10. Colorado, Nebraska, North and South Dakota, Kansas, Minnesota, Iowa, Missouri.

§ 12.82 Transmissions of call signs.

(a) An operator of an amateur station shall transmit the call sign of the station called or being worked and the call sign assigned the station which he is operating at the beginning and end of each transmission and at least once every 10 minutes during every transmission of more than 10 minutes' duration. In the case of stations conducting an exchange of several transmissions in sequence, with each transmission less than 3 minutes' duration, the call signs of the communicating stations need be transmitted only once every 10 minutes of operation as well as at the beginning and at the termination of the correspondence.

(b) In addition to complying with the requirements of paragraph (a) of this section, an operator of an amateur station operated as a portable or mobile station using radiotelegraphy shall transmit immediately after the call sign of such station, the fraction-bar character (\overline{DN}) followed by the number of the amateur call sign area in which the portable or mobile amateur station is then being operated, as for example:

Example 1. Portable or mobile amateur station operating in the third amateur call sign area calls a fixed amateur station: W1ABC W1ABC W1ABC DE W2DEF \overline{DN} 3 W2DEF \overline{DN} 3 \overline{AR} .

Example 2. Fixed amateur station answers the portable or mobile amateur station: W2DEF W2DEF W2DEF DE W1ABC K.

Example 3. Portable or mobile amateur station calls a portable or mobile amateur station: W3GHI W3GHI W3GHI DE W4JKL \overline{DN} 4 W4JKL \overline{DN} 4 \overline{AR} .

When telephony is used, the call sign of the station shall be preceded by the words "this is" or the word "from" instead of the letters "de," followed by an announcement of the geographical location in which the portable or mobile station is being operated.

Example 4. Portable or mobile amateur radiotelephone station operating in the third call area calls a fixed amateur station: W1ABC W1ABC W1ABC "this is" or the word "from" W2DEF W2DEF W2DEF operating portable (or mobile) 3 miles north of Bethesda, Md., over.

(c) When telephony is used, the transmission of call signs prescribed by paragraphs (a) and (b) of this section may be made by the person transmitting by voice in lieu of a duly licensed operator provided the licensed operator maintains the control required by § 12.28.

(d) When using telephony, phonetic aids to identify the call sign of the station may be employed.

(e) In addition to complying with the requirements of paragraph (a) of this section, an operator of an amateur station operated as a mobile station aboard a vessel on the high seas, or aboard an aircraft en route on an international voyage, shall, when the vessel or aircraft is outside the 10 call sign areas prescribed by the Commission in § 12.81 (b), comply with the following calling procedure:

(1) Mobile operations aboard a vessel.
(i) When using telegraphy the amateur operator shall transmit immediately after the call sign of the station the fraction bar \overline{DN} followed by the designator MM to indicate that the station

is being operated as a mobile station aboard a vessel. In addition, the name of the vessel and its approximate geographical location shall be transmitted at the end of each transmission immediately prior to signing off. If the vessel does not have a name, the number of the vessel shall be transmitted in lieu of the name of the vessel.

(ii) When using telephony the call sign of the station shall be preceded by the words "this is", or the word "from" followed by the words "maritime mobile", to indicate that the station is being operated as a mobile station aboard a vessel. In addition the name of the vessel and its approximate geographical location shall be transmitted at the end of each transmission immediately prior to signing off. If the vessel does not have a name, the number of the vessel shall be transmitted in lieu of the name of the vessel.

(2) Mobile operations aboard aircraft.

(i) When using telegraphy the amateur operator shall transmit immediately after the call sign of the station the fraction bar \overline{DN} followed by the designator AM to indicate that the station is being operated as a mobile station aboard an aircraft. In addition, the number of the aircraft and its approximate geographical location shall be transmitted at the end of each transmission immediately prior to signing off.

(ii) When using telephony the call sign of the station shall be preceded by the words "this is", or the word "from" followed by the words "aeronautical mobile", to indicate that the station is being operated as a mobile station aboard an aircraft. In addition, the number of the aircraft and its approximate geographical location shall be transmitted at the end of each transmission immediately prior to signing off.

PORTABLE AND MOBILE STATIONS

§ 12.91 Requirements for portable and mobile operation. (a)

Within the continental limits of the United States, its territories, or possessions, an amateur station may be operated as either a portable or a mobile station on any frequency authorized and available for the amateur radio service. Whenever portable operation is, or is likely to be, for an over-all period in excess of 48 hours away from the fixed transmitter location designated in the station license, the licensee shall give prior written notice to the Engineer in Charge of the radio inspection district in which such portable operation is intended. This notice is required even though the station is, or is likely to be, operated during any part of this over-all period at the fixed transmitter location. Whenever mobile operation is, or is likely to be, for a period in excess of 48 hours without return to the fixed transmitter location designated in the station license, the licensee shall give prior written notice to the Engineer in Charge of the radio inspection district in which such mobile operation is intended. The notice required for either portable or mobile operation shall state the station call sign, the name of the licensee, the date or dates of proposed operation and the contemplated portable station locations, or mobile station itin-

erary, as specifically as possible. An amateur station operated under the provisions of this section shall not be operated during any period exceeding one month away from the fixed station location designated in the station license without giving additional notice to the Engineer in Charge of the radio inspection district in which the station is intended to be further operated, nor for more than four consecutive periods of 1 month each as portable at the same location. Mobile operation without return to the fixed transmitter location may be continued beyond the four consecutive periods of 1 month each provided that the above mentioned notice of mobile operation is given each month.

(b) Outside the continental limits of the United States, its territories or possessions, an amateur station may be operated as portable or mobile only in the amateur band 28.0 to 29.7 Mc. Within areas under the jurisdiction of a foreign government, operation is also limited to this band and then only with the permission of that government. Whenever such portable or mobile operation is, or is likely to be, for a period in excess of 48 hours away from the continental limits of the United States, its territories, or possessions, the licensee shall give prior written notice to the Engineer in Charge of the radio inspection district in which the fixed transmitter site designated in the station license is located. Only one such notice shall be required during any continued absence from the continental limits of the United States, its territories, or possessions.

§ 12.93 *Special provisions for non-portable stations.* The specific provisions of these rules relative to portable stations are not applicable to a nonportable station except that—

(a) An amateur station that has been moved from one permanent location to another permanent location may be operated at the latter location, in accordance with the provisions governing portable stations (including notice to the Engineer in Charge of the district in which the station is located) for a period not exceeding four consecutive months, but in no event beyond the expiration date of the license, provided a formal application for modification of license to change the permanent location has been filed with the Commission.

(b) The licensee of an amateur station who changes residence temporarily and moves his amateur station to a temporary location associated with his temporary residence, or the licensee-trustee for an amateur radio society which changes the normal location of its amateur station to a different and temporary location may use the station at the temporary location if the station is to remain there for a period of not more than 4 months and the following requirements are met:

(1) Advance notice in writing shall be given by the amateur station licensee or licensee-trustee to the Commission in Washington, D. C., and to the Engineer in Charge of the district in which the station is to be temporarily operated.

(2) Similar notice shall be given for

each change in station location and for transfer of the station to the former permanent location, or to a new permanent location before the transmitting apparatus is operated.

(c) When the station is operated under the provisions of this section the calling procedure specified in § 12.82 shall be used, including transmissions of the fractional bar character when telegraphy is used followed by the number of the amateur call sign area in which the station is being operated. When telephony is used, an announcement shall be made of the geographical location in which the station is being operated.

§ 12.94 *Special provisions for mobile stations aboard ships or aircraft.* In addition to complying with all other applicable rules, an amateur mobile station operated on board a ship or aircraft must comply with all of the following special conditions: (a) The installation and operation of the amateur mobile station shall be approved by the master of the ship or captain of the aircraft; (b) The amateur mobile station shall be separate from and independent of all other radio equipment, if any, installed on board the same ship or aircraft; (c) The electrical installation of the amateur mobile station shall be in accord with the rules applicable to ships or aircraft as promulgated by the appropriate government agency; (d) The operation of the amateur mobile station shall not interfere with the efficient operation of any other radio equipment installed on board the same ship or aircraft; and (e) The amateur mobile station and its associated equipment, either in itself or in its method of operation, shall not constitute a hazard to the safety of life or property.

USE OF AMATEUR STATIONS

§ 12.101 *Points of communications.* An amateur station may be used to communicate only with other amateur stations, except that in emergencies or for test purposes it may also be used temporarily for communication with other classes of stations licensed by the Commission, and with United States Government stations. Amateur stations may also be used to communicate with any radio station other than amateur which is authorized by the Commission to communicate with amateur stations. Amateur stations may be used also for transmitting signals, or communications, or energy, to receiving apparatus for the measurement of emissions, temporary observation of transmission phenomena, radio control of remote objects, and for similar experimental purposes and for the purposes set forth in § 12.106.

§ 12.102 *No remuneration for use of station.* An amateur station shall not be used to transmit or receive messages for hire, nor for communication for material compensation, direct or indirect, paid or promised.

§ 12.103 *Broadcasting prohibited.* Subject to the provisions of § 12.106, an amateur station shall not be used to engage in any form of broadcasting, that is, the dissemination of radio communica-

tions intended to be received by the public directly or by the intermediary of relay stations, nor for the retransmission by automatic means of programs or signals emanating from any class of station other than amateur. The foregoing provision shall not be construed to prohibit amateur operators from giving their consent to the rebroadcast by broadcast stations of the transmissions of their amateur stations, provided, that the transmissions of the amateur stations shall not contain any direct or indirect reference to the rebroadcast.

§ 12.104 *Radiotelephone tests.* The transmission of music by an amateur station is forbidden. However, single audiofrequency tones may be transmitted for test purposes of short duration for the development and perfection of amateur radiotelephone equipment.

§ 12.105 *Codes and ciphers prohibited.* The transmission by radio of messages in codes or ciphers in domestic and international communications to or between amateur stations is prohibited. All communications regardless of type of emission employed shall be in plain language except that generally recognized abbreviations established by regulation or custom and usage are permissible as are any other abbreviations or signals where the intent is not to obscure the meaning but only to facilitate communications.

§ 12.106 *One-way communications.* In addition to the experimental one-way transmissions permitted by § 12.101, the following kinds of one-way communications, addressed to amateur stations, are authorized and will not be construed as broadcasting: (a) Emergency communications, including bona-fide emergency drill practice transmissions; (b) Information bulletins consisting solely of subject matter having direct interest to the amateur radio service as such; (c) Round-table discussions or net-type operations where more than two amateur stations are in communication, each station taking a turn at transmitting to other station(s) of the group; and (d) Code practice transmissions intended for persons learning or improving proficiency in the International Morse Code.

ALLOCATION OF FREQUENCIES¹

§ 12.111 *Frequencies and types of emission for use of amateur stations.* (a) Subject to the limitations and restrictions set forth in this section and in § 12.114, the following frequency bands and types of emissions are allocated and available for amateur station operation as follows:

(1) 1800 to 2000 kc and 2006 to 2050 kc. Use of this band by amateur radio stations is restricted as follows:

(i) 1800 to 2000 kc. Use of this band is on a shared basis with the Loran system of radio navigation. In any par-

¹ The assignment and use of all frequencies below 25 megacycles contained in these regulations are subject to change in accordance with the Commission's final report of allocations below 25 megacycles, in Docket Proceeding No. 6651.

ticular area the Loran system of radio navigation operates either on 1850 or 1950 kc, the band occupied being 1800 to 1900 or 1900 to 2000 kc. The amateur service may use in any area whichever bands, 1800 to 1825 and 1875 to 1900 kc, or 1900 to 1925 and 1975 to 2000 kc, are not required for Loran in that area, in accordance with the following limitations and conditions:

(a) Mississippi River to East Coast U. S. (except Florida and states bordering Gulf of Mexico): 1800 to 1825 kc and 1875 to 1900 kc, using type A-1 or A-3 emission. Power input to the plate circuit of the tube or tubes supplying power to the antenna shall not exceed 50¹ watts day, 200 watts night.

(b) Mississippi River to West Coast U. S. (except states bordering Gulf of Mexico): 1900 to 1925 kc and 1975 to 2000 kc, using type A-1 or A-3 emission. Power input to the plate circuit of the tube or tubes supplying power to the antenna shall not exceed 500 watts day, 200 watts night, except in the State of Washington where daytime power is limited to 200 watts and nighttime power to 50 watts.

(c) Florida and states bordering Gulf of Mexico: 1800 to 1825 kc and 1875 to 1900 kc, using type A-1 or A-3 emission. Power input to the plate circuit of the tube or tubes supplying power to the antenna shall not exceed 200 watts day, no operation at night.

(d) Puerto Rico and Virgin Islands: 1900 to 1925 kc and 1975 to 2000 kc, using type A-1 or A-3 emission. Power input to the plate circuit of the tube or tubes supplying power to the antenna shall not exceed 500 watts day, 50 watts night.

(e) Hawaiian Islands: 1900 to 1925 kc, and 1975 to 2000 kc, using type A-1 or A-3 emission. Power input to the plate circuit of the tube or tubes supplying power to the antenna shall not exceed 500 watts day, 200 watts night.

(f) The use of these frequencies by stations in the Amateur Service shall not cause harmful interference to the Loran system of radio navigation. If an amateur station causes such interference, the station licensee shall, as directed by the Commission, immediately cease operation on the frequencies involved.

(g) The use of these frequencies by the Amateur Service shall not be a bar to expansion of the radio navigation (Loran) service, and such use, and the limitations and conditions of such use as set forth in this subparagraph, shall be considered temporary in the sense that they shall remain subject to cancellation or to revision, in whole or in part, without hearing, whenever the Commission shall deem such cancellation or revision to be necessary or desirable in the light of the priority within this band of the Loran system of radio navigation.

(1) 2006 to 2050 kc. Not available for use.

(2) 3500 to 4000 kc. Use of this band is restricted to amateur radio stations as follows:

(i) 3500 to 4000 kc, using type A-1 emission, to those stations located within the continental limits of the United States, the Territories of Alaska and Hawaii, Puerto Rico, the Virgin Islands

and all United States possessions lying west of the Territory of Hawaii to 170° west longitude.

(ii) 3800 to 4000 kc, using type A3 emission and, on frequencies 3800 to 3850 kc, using narrow band frequency or phase modulation for radiotelephony, to those stations located within the continental limits of the United States, the Territories of Alaska and Hawaii, Puerto Rico, the Virgin Islands and all United States possessions lying west of the Territory of Hawaii to 170° west longitude, subject to the further restriction that type A3 emission, or narrow band frequency or phase modulation for radiotelephony, may be used only by an amateur station which is licensed to an amateur operator holding an Amateur Extra Class or Advanced Class license and then only when operated and controlled by an amateur operator holding an Amateur Extra Class or Advanced Class license.

(3) 7000 to 7300 kc, using type A1 emission.

(4) 14000 to 14400 kc, using type A1 emission and, on frequencies 14200 to 14300 kc, type A3 emission and, on frequencies 14200 to 14250 kc, using narrow band frequency or phase modulation for radiotelephony, subject to the restriction that type A3 emission, or narrow band frequency of phase modulation for radiotelephony, may be used only by an amateur station which is licensed to an amateur operator holding an Amateur Extra Class or Advanced Class license and then only when operated and controlled by an amateur operator holding an Amateur Extra Class or Advanced Class license.

(5) 26.960 to 27.230 Mc, using A₀, A1, A2, A3, and A4 emission and also special emission for frequency modulation (radiotelephone transmissions and radiotelegraph transmissions employing carrier shift or other frequency modulation techniques), subject to such interference as may result from the emissions of industrial, scientific and medical devices within 160 kc of the frequency 27.120 Mc.

(6) 28.0 to 29.7 Mc, using type A1 emission and, on frequencies 28.5 to 29.7 Mc using type A3 emission and narrow band frequency or phase modulation for radiotelephony and, on frequencies 29.0 to 29.7, using special emission for frequency modulation (radiotelephone transmissions and radiotelegraph transmissions employing carrier shift or other frequency modulation techniques).

(7) 50.0 to 54.0 Mc, using types A1, A2, A3, and A4 emission and narrow band frequency or phase modulation for radiotelephony and, on frequencies 52.5 to 54.0 Mc, special emission for frequency modulation (radiotelephone transmissions and radiotelegraph transmissions employing carrier shift or other frequency modulation techniques).

(8) 144 to 148 Mc, using types A₀, A1, A2, A3, and A4 emission and special emission for frequency modulation (radiotelephone transmissions and radiotelegraph transmissions employing carrier shift or other frequency modulation techniques).

(9) 220 to 225 Mc, using types A₀, A1, A2, A3, and A4 emission and special emission for frequency modulation (radiotelephone transmissions and radiotelegraph transmissions employing carrier shift or other frequency modulation techniques), provided that until January 1, 1952, if this band is required for distance measuring equipment at certain United States gateways and Canadian border locations, amateurs within interference range of those gateways and locations shall, after publication by the Commission of an order designating the areas involved, cease to use this band, but shall be entitled in lieu thereof to use the band 235 to 240 Mc.

(10) 235 to 240 Mc, using type A₀, A1, A2, A3, and A4 emission and special emission for frequency modulation (radiotelephone transmissions and radiotelegraph transmissions employing carrier shift or other frequency modulation techniques) until January 1, 1952, provided that commencing with June 9, 1948, this band may be used only as a substitute for the band 220 to 225 Mc in those cases in which the band 220 to 225 Mc may not be used, as provided in subparagraph (9) of this paragraph.

(11) 420 to 450 Mc, using types A₀, A1, A2, A3, A4, and A5 emissions and special emission for frequency modulation (radiotelephone transmissions and radiotelegraph transmissions employing carrier shift or other frequency modulation techniques). Peak antenna power shall not exceed 50 watts in order to minimize interference to aircraft altimeters temporarily allocated to this band.

(12) 1215 to 1300 Mc, using types A₀, A1, A2, A3, A4, and A5 emission and special emission for frequency modulation (radiotelephone transmissions and radiotelegraph transmissions employing carrier shift or other frequency modulation techniques).

(13) 2300 to 2450 Mc, 3300 to 3500 Mc, 5650 to 5925 Mc, 10,000 to 10,500 Mc, 21,000 to 22,000 Mc, and any frequency or frequencies above 30,000 Mc, using on these frequencies types A₀, A1, A2, A3, A4, A5 emission and special emission for frequency modulation (radiotelephone

¹ In those portions of the States of Texas and New Mexico in the area bounded on the south by parallel 31°53' N., on the east by longitude 105°40' W., on the north by parallel 33°24' N., and on the west by longitude 106°40' W., the frequency band 220-225 Mc. is not available for use by amateur stations engaged in normal amateur operation between the hours of 0500 and 1800 local time Monday through Friday inclusive of each week. However, the entire frequency band 220-225 Mc. shall be applicable in all areas to those amateur stations authorized to operate in an organized civil defense network during all periods when civil defense emergencies exist and, in addition, special arrangements for civil defense drills between the hours and within the area set forth above may be made upon mutual agreement between the Federal Communications Commission Engineer in Charge at Dallas, Texas, and the Area Frequency Coordinator at White Sands, New Mexico, if it appears necessary to conduct such drills. Such arrangements shall specify dates and times, and will depend upon the degree of use of the frequency band at White Sands at any particular time.

transmissions and radiotelegraph transmissions employing carrier shift or other frequency modulation techniques), and pulse emission. Operations in the frequency bands 2300 to 2450 Mc and 5650 to 5925 Mc are subject to such interference between 2400 and 2450 Mc and between 5775 and 5925 Mc, respectively, as may result from emissions of industrial, scientific and medical devices on the frequencies 2450 and 5850 Mc, respectively.

§ 12.113 *Individual frequency not specified.* Transmissions by an amateur station may be on any frequency within any authorized amateur band. Sideband frequencies resulting from keying or modulating a carrier wave shall be confined within the authorized amateur band.

§ 12.114 *Types of emission.* (a) Type A0 emission, where not specifically designated in the bands listed in § 12.111, may be used for short periods of time when required for authorized remote control purposes or for experimental purposes. However, these limitations do not apply where type A0 emission is specifically designated.

(b) [Deleted]

(c) The use of narrow band frequency or phase modulation is subject to the conditions that the band-width of the modulated carrier shall not exceed the band-width occupied by an amplitude-modulated carrier of the same audio characteristics, and that the purity and stability of such emissions shall be maintained in accordance with the requirements of § 12.133.

EQUIPMENT AND OPERATION

§ 12.131 *Maximum authorized power.* Except on frequencies within the band 420 to 450 megacycles (where peak antenna power shall not exceed 50 watts), each amateur transmitter may be operated with a power input not exceeding 1 kilowatt to the plate circuit of the final amplifier stage of an amplifier-oscillator transmitter or to the plate circuit of an oscillator transmitter. An amateur transmitter operating with a power input exceeding 900 watts to the plate circuit shall provide means for accurately measuring the plate power input to the vacuum tube or tubes supplying power to the antenna.

§ 12.132 *Power supply to transmitter.* The licensee of an amateur station using frequencies below 144 megacycles shall use adequately filtered direct-current plate power supply for the transmitting equipment to minimize modulation from this source.

§ 12.133 *Purity and stability of emissions.* Spurious radiation from an amateur station being operated with a carrier frequency below 144 megacycles shall be reduced or eliminated in accordance with good engineering practice. This spurious radiation shall not be of sufficient intensity to cause interference in receiving equipment of good engineering design including adequate selectivity characteristics, which is tuned to a frequency or frequencies outside the frequency band of emission normally

required for the type of emission being employed by the amateur station. In the case of A-3 emission, the amateur transmitter shall not be modulated to the extent that interfering spurious radiation occurs, and in no case shall the emitted carrier wave be amplitude-modulated in excess of 100 percent. Means shall be employed to insure that the transmitter is not modulated in excess of its modulation capability for proper technical operation. For the purposes of this section a spurious radiation is any radiation from a transmitter which is outside the frequency band of emission normal for the type of transmission employed, including any component whose frequency is an integral multiple or submultiple of the carrier frequency (harmonics and subharmonics), spurious modulation products, key clicks, and other transient effects, and parasitic oscillations. When using amplitude modulation on frequencies below 144 megacycles, simultaneous frequency modulation is not permitted and when using frequency modulation on frequencies below 144 megacycles simultaneous amplitude modulation is not permitted. The frequency of the emitted carrier wave shall be as constant as the state of the art permits.

§ 12.134 *Modulation of carrier wave.* Except for brief tests or adjustments and except for operation in the band 26.960 to 27.230 megacycles, an amateur radiotelephone station shall not emit a carrier wave on frequencies below 144 megacycles unless modulated for the purpose of communication.

§ 12.135 *Frequency measurement and regular check.* The licensee of an amateur station shall provide for measurement of the emitted carrier frequency or frequencies and shall establish procedure for making such measurement regularly. The measurement of the emitted carrier frequency or frequencies shall be made by means independent of the means used to control the radio frequency or frequencies generated by the transmitting apparatus and shall be of sufficient accuracy to assure operation within the amateur frequency band used.

§ 12.136 *Logs.* Each licensee of an amateur station shall keep an accurate log of station operation, including the following:

(a) The date and time of each transmission. (The date need only be entered once for each day's operation. The expression "time of each transmission" means the time of making a call and need not be repeated during the sequence of communication which immediately follows; however, an entry shall be made in the log when signing off so as to show the period during which communication was carried on.)

(b) The signature of each licensed operator who manipulates the key of a radiotelegraph transmitter or the signature of each licensed operator who operates a transmitter of any other type and the name of any person not holding an amateur operator license who transmits by voice over a radiotelephone transmitter. The signature of the operator need only be entered once in the log, in those cases when all transmissions are

made by or under the supervision of the signatory operator, provided a statement to that effect also is entered. The signature of any other operator who operated the station shall be entered in the proper space for that operator's transmission.

(c) Call sign of the station called. (This entry need not be repeated for calls made to the same station during any sequence of communication, provided the time of signing off is given.)

(d) The input power to the oscillator, or to the final amplifier stage where an oscillator-amplifier transmitter is employed. (This need be entered only once, provided the input power is not changed.)

(e) The frequency band used. (This information need be entered only once in the log for all transmissions until there is a change in frequency to another amateur band.)

(f) The type of emission used. (This need be entered only once until there is a change in the type of emission.)

(g) The location of the station (or the approximate geographical location of a mobile station) at the time of each transmission. (This need be entered only once provided the location of the station is not changed. However, suitable entry shall be made in the log upon changing the location. Where operating at other than a fixed location, the type and identity of the vehicle or other mobile unit in which the station is operated shall be shown.)

(h) The message traffic handled. (If record communications are handled in regular message form, a copy of each message sent and received shall be entered in the log or retained on file at the station for at least 1 year.)

§ 12.137 *Retention of logs.* The log shall be preserved for a period of at least 1 year following the last date of entry. The copies of record communications and station log required by § 12.136 shall be available for inspection by authorized representatives of the Commission.

SPECIAL CONDITIONS

§ 12.151 *Additional conditions to be observed by licensee.* In all respects not specifically covered by these regulations each amateur station shall be operated in accordance with good engineering and good amateur practice.

§ 12.152 *Restricted operation.* (a) If the operation of an amateur station causes general interference to the reception of transmissions from stations operating in the domestic broadcast service when receivers of good engineering design including adequate selectivity characteristics are used to receive such transmissions and this fact is made known to the amateur station licensee, the amateur station shall not be operated during the hours from 8 p. m. to 10:30 p. m., local time, and on Sunday for the additional period from 10:30 a. m. until 1 p. m., local time, upon the frequency or frequencies used when the interference is created.

(b) In general, such steps as may be necessary to minimize interference to stations operating in other services may be required after investigation by the Commission.

§ 12.153 *Second notice of same violation.* In every case where an amateur station licensee is cited within a period of 12 consecutive months for the second violation of the provisions of §§ 12.111, 12.113, 12.114, 12.132, or 12.133, the station licensee, if directed to do so by the Commission, shall not operate the station and shall not permit it to be operated from 6 p. m. to 10:30 p. m., local time, until written notice has been received authorizing the resumption of full-time operation. This notice will not be issued until the licensee has reported on the results of tests which he has conducted with at least two other amateur stations at hours other than 6 p. m. to 10:30 p. m., local time. Such tests are to be made for the specific purposes of aiding the licensee in determining whether the emissions of the station are in accordance with the Commission's rules. The licensee shall report to the Commission the observations made by the cooperating amateur licensees in relation to the reported violations. This report shall include a statement as to the corrective measures taken to insure compliance with the rules.

§ 12.154 *Third notice of same violation.* In every case where an amateur station licensee is cited within a period of 12 consecutive months for the third violation of §§ 12.111, 12.113, 12.114, 12.132 or 12.133, the station licensee if directed by the Commission, shall not operate the station and shall not permit it to be operated from 8 a. m. to 12 midnight, local time, except for the purposes of transmitting a prearranged test to be observed by a monitoring station of the Commission to be designated in each particular case. The station shall not be permitted to resume operation during these hours until the licensee is authorized by the Commission, following the test, to resume full-time operation. The results of the test and the licensee's record shall be considered in determining the advisability of suspending the operator license or revoking the station license, or both.

§ 12.155 *Answers to notices of violations.* Any licensee receiving official notice of a violation of the terms of the Communications Act of 1934, as amended, any legislative act, Executive order, treaty to which the United States is a party, or the rules and regulations of the Federal Communications Commission, shall, within 3 days from such receipt, send a written answer direct to the office of the Commission originating the official notice: *Provided, however,* That if an answer cannot be sent nor an acknowledgment made within such 3-day period by reason of illness or other unavoidable circumstances, acknowledgment and answer shall be made at the earliest practicable date with a satisfactory explanation of the delay. The answer to each notice shall be complete in itself and shall not be abbreviated by reference to other communications or answers to other notices. If the notice relates to some violation that may be due to the physical or electrical charac-

teristics of transmitting apparatus, the answer shall state fully what steps, if any, are taken to prevent future violations, and if any new apparatus is to be installed, the date such apparatus was ordered, the name of the manufacturer, and promised date of delivery. If the notice of violation relates to some lack of attention or improper operation of the transmitter, the name of the operator in charge shall be given.

§ 12.156 *Operation in emergencies.* In the event of widespread emergency conditions affecting domestic communication facilities, the Commission may confer with representatives of the amateur service and others, and if deemed advisable, declare that a state of general communications emergency exists, designating the area or areas concerned (normally not exceeding 1,000 miles from center of the affected area), whereupon it shall be incumbent upon each amateur station in such area or areas to observe the following restrictions for the duration of such emergency:

(a) Transmissions, other than those relating to relief work or other emergency service, such as amateur station networks can provide, shall not be made within the 1750-2050-kilocycle or 3500-4000-kilocycle bands. Incidental calling, testing and working, including casual conversion or remarks not pertinent or necessary to constructive handling of the emergency situation shall be prohibited.

(b) Frequencies within the bands 2025-2050-kilocycle, 3500-3525-kilocycle and 3975-4000-kilocycle shall be reserved for emergency calling channels, for initial calls from isolated stations or first calls concerning very important emergency relief matters or arrangements. All stations having occasion to use such channels shall change, as quickly as possible, to other frequencies for carrying on their communications.

(c) A 5-minute listening period for the first 5 minutes of each hour shall be uniformly observed for initial calls of major importance, both in the designated emergency calling channels and throughout the 1750-2050-kilocycle and 3500-4000-kilocycle bands. Only stations isolated or engaged in handling official traffic of the highest priority may continue with transmissions in these listening periods. No replies to calls or resumption of routine traffic shall be made in the 5-minute listening periods.

(d) The Commission may designate certain amateur stations to assist in promulgation of its emergency announcement, to police the 1750-2050-kilocycle and 3500-4000-kilocycle bands and to warn noncomplying stations observed to be operating therein. The operators of these observing stations shall report fully to the Commission the identity of any stations failing to comply, after notice, with any of the pertinent provisions of this section. Such designated stations will act in an advisory capacity when able to provide information on emergency circuits. Their policing authority shall be limited to the transmission of information from responsible official sources, and full reports of noncompli-

ance which may serve as a basis for investigation and action under section 502 of the Communications Act. Such policing authority shall apply only to the 1750-2050-kilocycle and 3500-4000-kilocycle bands. Individual policing transmissions shall refer to this section of the rules by number (§ 12.156) and shall specify briefly and concisely the date of the Commission's declaration and the area and nature of the emergency. Policing observer station shall not enter into discussions with other stations beyond the furnishing of essential facts relative to the emergency.

(e) The special conditions imposed under this section will cease to apply only after the Commission shall have declared such emergency to be terminated.

§ 12.157 *Obscenity, indecency, profanity.* No licensed radio operator or other person shall transmit communications containing obscene, indecent, or profane words, language, or meaning.

§ 12.158 *False signals.* No licensed radio operator shall transmit false or deceptive signals or communications by radio, or any call letter or signal which has not been assigned by proper authority to the radio station he is operating.

§ 12.159 *Unidentified communications.* No licensed radio operator shall transmit unidentified radio communications or signals.

§ 12.160 *Interference.* No licensed radio operator shall willfully or maliciously interfere with or cause interference to any radio communication or signal.

§ 12.161 *Damage to apparatus.* No licensed radio operator shall willfully damage, or cause or permit to be damaged, any radio apparatus or installation in any licensed radio station.

§ 12.162 *Fraudulent licenses.* No licensed radio operator or other person shall obtain or attempt to obtain, or assist another to obtain or attempt to obtain, an operator license by fraudulent means.

APPENDIX

EXAMINATION POINTS

Examinations for amateur radio operator licenses are conducted at the Commission's office in Washington, D. C., Monday through Friday, except holidays (office hours are from 8:30 a. m. to 5 p. m.), and at each radio district office of the Commission on the days designated by the Engineer in Charge of the office. Specific dates should be obtained from the Engineer in Charge. For a list of such offices see the following pages.

Examinations are also given frequently, by appointment, at the Commission's offices at the following points:

Mobile, Ala.	Tampa, Fla.
Savannah, Ga.	Juneau, Alaska.
San Diego, Calif.	Anchorage, Alaska.

Examinations are also given at greater intervals at the places named below, which are visited for that purpose by Commission examiners from the district offices for such locations. For current schedules, exact time, place, and other details, inquiry should be addressed to the office conducting examinations at the chosen point.

QUARTERLY POINTS

Birmingham, Ala.
 Charleston, W. Va.
 Cincinnati, Ohio.
 Cleveland, Ohio.
 Columbus, Ohio.
 Corpus Christi, Tex.
 Davenport, Iowa.
 Des Moines, Iowa.
 Fort Wayne, Ind.
 Fresno, Calif.
 Grand Rapids, Mich.
 Indianapolis, Ind.
 Jackson, Miss.
 Knoxville, Tenn.
 Little Rock, Ark.
 Memphis, Tenn.
 Milwaukee, Wis.

SEMIANNUAL

Albuquerque, N. Mex.
 Amarillo, Tex.
 Bakersfield, Calif.
 Bangor, Maine.
 Boise, Idaho.
 Butte, Mont.
 El Paso, Tex.
 Hartford, Conn.
 Hilo, Hawaii, T. H.
 Jacksonville, Fla.
 Jamestown, N. Dak.
 Lihue, Kauai, T. H.

ANNUAL

Billings, Mont.
 Cumberland, Md.
 Klamath Falls, Oreg.
 Las Vegas, Nev.

Arrangements have also been made, including cooperation of other Federal agencies, for classes A and B examinations in outlying areas as follows:

Alaska: United States Signal Corps stations.

Guam: District Communications Officer, United States naval station.

Hawaii: At not exceeding one point on any island, by the Engineer in Charge (Honolulu).

EXTRACTS FROM GENERAL RADIO REGULATIONS (Cairo revision)

ARTICLE 5—CLASSIFICATION OF EMISSIONS

SECTION 1. Emissions shall be classified below according to the purpose for which they are used, assuming their modulation or their possible keying to be only in amplitude.

1. Continuous waves:

Type A₀. Waves the successive oscillations of which are identical under fixed conditions.¹

Type A₁. Telegraphy on pure continuous waves. A continuous wave which is keyed according to a telegraph code.

Type A₂. Modulated telegraphy. A carrier wave modulated at one or more audible frequencies, the audible frequency or frequencies or their combination with the carrier wave being keyed according to a telegraph code.

Type A₃. Telephony. Waves resulting from the modulation of a carrier wave by frequencies corresponding to the voice, to music, or to other sounds.

Type A₄. Facsimile. Waves resulting from the modulation of a carrier wave by frequencies produced at the time of the scanning of a fixed image with a view to its reproduction in a permanent form.

Type A₅. Television. Waves resulting from the modulation of a carrier wave by

¹ These waves used only in special cases, such as standard frequency emissions.

RADIO DISTRICTS

Radio district	Address of the engineer in charge	Territory within district	
		States, etc.	Counties
1	1600 Customhouse, Boston 9 Mass.	Connecticut..... Maine..... Massachusetts..... New Hampshire..... Rhode Island..... Vermont..... New Jersey.....	All counties. Do. Do. Do. Do. Do. Bergen, Essex, Hudson, Hunterdon, Mercer, Middlesex, Monmouth, Morris, Passaic, Somerset, Sussex, Union, and Warren.
2	748 Federal Bldg., 641 Washington St., New York 14, N. Y.	New York.....	Albany, Bronx, Columbia, Delaware, Dutchess, Greene, Kings, Nassau, New York, Orange, Putnam, Queens, Rensselaer, Richmond, Rockland, Schenectady, Suffolk, Sullivan, Ulster, and Westchester.
3	Room 1005, New United States Customhouse, 2nd and Chestnut Sts., Philadelphia 6, Pa.	Delaware..... New Jersey..... Pennsylvania.....	New Castle. Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, Ocean, and Salem. Adams, Berks, Bucks, Carbon, Chester, Cumberland, Dauphin, Delaware, Lancaster, Lebanon, Lehigh, Monroe, Montgomery, Northampton, Perry, Philadelphia, Schuylkill, and York.
4	508 Old Town Bank Bldg., Gay St. and Fallsway, Baltimore 2, Md.	Delaware..... District of Columbia..... Maryland..... Virginia..... West Virginia.....	Kent and Sussex. All. All counties. Arlington, Clarke, Fairfax, Fauquier, Frederick, Loudoun, Page, Prince William, Rappahannock, Shenandoah, and Warren. Barbour, Berkeley, Grant, Hampshire, Hardy, Harrison, Jefferson, Lewis, Marion, Mineral, Monongalia, Morgan, Pendleton, Preston, Randolph, Taylor, Tucker, Upshur.
5	Room 402, New Post Office Bldg., Norfolk 10, Va.	North Carolina.....	All except district 6.
6	411 Federal Annex, Atlanta 3, Ga. Suboffice, P. O. Box 77, 214 Post Office Bldg., York and Bull Sts. Savannah, Ga.	Virginia..... Alabama..... Georgia..... North Carolina.....	All except district 4. All except district 8. All counties. Ashe, Avery, Buncombe, Burke, Caldwell, Cherokee, Clay, Cleveland, Graham, Haywood, Henderson, Jackson, McDowell, Macon, Madison, Mitchell, Polk, Rutherford, Swain, Transylvania, Watauga, and Yancey.
7	P. O. Box 150, 312 Federal Bldg., Miami 1, Fla. Suboffice, 410 P. O. Bldg., Florida Ave., Tampa 2, Fla.	South Carolina..... Tennessee..... Florida.....	All counties. Do. All except district 8.
8	400 Audubon Bldg., New Orleans 16, La. Suboffice, 419 U. S. Court-house and Customhouse, Mobile 10, Ala.	Alabama..... Arkansas..... Florida..... Louisiana..... Mississippi..... Texas..... Texas.....	Baldwin and Mobile. All counties. Escambia. All counties. Do. City of Texarkana only. Angelina, Aransas, Atascosa, Austin, Bandera, Bastrop, Bee, Bexar, Blanco, Brazoria, Brazos, Brooks, Burleson, Caldwell, Calhoun, Cameron, Chambers, Colorado, Comal, DeWitt, Duval, Dimmit, Edwards, Fayette, Fort Bend, Frio, Galveston, Gillespie, Goliad, Gonzales, Grimes, Guadalupe, Hardin, Hays, Harris, Hidalgo, Jackson, Jasper, Jefferson, Jim Hogg, Jim Wells, Karnes, Kenedy, Kendall, Kerr, Kinney, Kleberg, LaSalle, Lavaca, Lee, Liberty, Live Oak, Matagorda, Madison, Maverick, McMullen, Medina, Montgomery, Nacogdoches, Newton, Nueces, Orange, Polk, Real, Refugio, San Augustine, San Jacinto, San Patricio, Sabine, Starr, Travis, Trinity, Uvalde, Val Verde, Victoria, Walker, Waller, Washington, Webb, Wharton, Willacy, Williamson, Wilson, Zapata, Zavala, and Tyler.
9	324 U. S. Appraisers Stores Bldg., 7300 Wingate St., Houston 11, Tex. Suboffice, P. O. Box 1527, 329 Post Office Bldg., 300 Willow St., Beaumont, Tex.	New Mexico..... Oklahoma..... Texas.....	All counties. Do. All except district 9 and the city of Texarkana.
10	P. O. Box 5238, 500 U. S. Terminal Annex Bldg., Houston, and Jackson Sts., Dallas 2, Tex.	Arizona..... California.....	All counties. Imperial, Inyo, Kern, Los Angeles, Orange, Riverside, San Bernardino, San Diego, San Luis Obispo, Santa Barbara, Ventura.
11	539 U. S. Post Office and Courthouse Bldg., Temple and Spring Sts., Los Angeles 12, Calif. Suboffice, 15-C U. S. Customhouse Bldg., Union and "F" Sts., San Diego 1, Calif.	Nevada.....	Clark.
12	323-A Customhouse San Francisco 26, Calif.	California..... Nevada.....	All except district 11. All except Clark.
13	307 Fitzpatrick Bldg., 918 S. W. Oak St., Portland 5 Oreg.	Idaho..... Oregon..... Washington.....	All except district 14. All counties. Wahkiakum, Cowlitz, Clark, Skamania, and Klickitat.
14	801 Federal Office Bldg., Seattle 4, Wash.	Idaho..... Montana..... Washington..... Colorado..... Utah..... Wyoming..... Nebraska.....	Benewah, Bonner, Boundary, Clearwater, Idaho, Kootenai, Latah, Lewis, Nez Perce, and Shoshone. All counties. All except district 13. All counties. Do. Do. Banner, Box Butte, Cheyenne, Dawes, Deuel, Garden, Kimball, Morrill, Scotts Bluff, Sheridan, Sioux.
15	521 New Customhouse, 19th St. between California and Stout Sts., Denver 2, Colo.	South Dakota.....	Butte, Custer, Fall River, Lawrence, Meade, Pennington, Shannon, Washington.

RADIO DISTRICTS—Continued

Radio district	Address of the engineer in charge	Territory within district	
		States, etc.	Counties
16	208 Uptown Post Office and Federal Courts Bldg., 5th and Washington Sts., St. Paul 2 Minn.	Minnesota..... Michigan.....	All counties. Alger Baraga, Chippewa, Delta, Dickinson, Gogebic, Houghton, Iron Keweenaw, Luce, Mackinac, Marquette, Menominee, Ontonagon, and Schoolcraft.
17	3200 Federal Office Building, 911 Walnut Street, Kansas City 6, Mo.	South Dakota..... North Dakota..... Wisconsin..... Iowa..... Kansas..... Missouri..... Nebraska..... Illinois..... Indiana..... Iowa.....	All except district 15. All counties. All except district 18. Do. All counties. Do. All except district 15. All counties. Do. Allamee, Buchanan, Cedar, Clayton, Clinton, Delaware, Des Moines, Dubuque, Fayette, Henry, Jackson, Johnson, Jones, Lee, Linn, Louisa, Muscatine, Scott Washington, and Winnebago.
18	1300 U. S. Courthouse, 219 South Clark St., Chicago, 4, Ill.	Wisconsin..... Kentucky..... do.....	Brown, Columbia, Calumet, Crawford, Dane, Dodge, Door, Fond du Lac, Grant, Green, Iowa, Jefferson, Kewaunee, Kenosha, Lafayette, Manitowoc, Marinette, Milwaukee, Ozaukee, Oconto, Outagamie, Racine, Richland, Rock, Sauk, Sheboygan, Walworth, Washington, Waukesha, and Winnebago. All except district 19. Bath, Bell, Boone, Bourbon, Boyd, Bracken, Breathitt, Campbell, Carter, Clark, Clay, Elliott, Estill, Fayette, Fleming, Floyd, Franklin, Gallatin, Garrard, Grant, Greenup, Kenton, Harlan, Harrison, Jackson, Jessamine, Johnson, Knott, Knox, Laurel, Lawrence, Lee, Leslie, Letcher, Lewis, Lincoln, Madison, Magoffin, Martin, Mason, McCreary, Menifee, Montgomery, Morgan, Nicholas, Owen, Owsley, Pendleton, Perry, Pike, Powell, Pulaski, Robertson, Rockcastle, Rowan, Scott, Wayne, Whitley, Wolfe, Woodford.
19	1029 New Federal Bldg., Detroit 26, Mich.	Ohio..... Michigan..... West Virginia..... New York..... Pennsylvania.....	All counties. All except district 16. All except district 4. All except district 2. All except district 3.
20	328 Federal Bldg., Ellicott and Swan Streets, Buffalo 3, N. Y.	Territory of Hawaii and outlying Pacific possessions, except Alaska and adjacent islands.	
21	600 Stangenwald Bldg., 119 Merchant St., Honolulu 1, T. H.	Puerto Rico, Virgin Islands.	
22	P. O. Box 2987, 322-323 Federal Bldg., San Juan 13, P. R.	Alaska.	
23	P. O. Box 1421, 7-8 Shattuck Bldg., Third and Seward Sts., Juneau, Alaska. Suboffice, 53 U. S. P. O. and Court House, P. O. Box 644, Anchorage, Alaska.		

frequencies produced at the time of the scanning of fixed or moving objects.¹

NOTE. The band widths to which these emissions correspond are indicated in appendix 3.

2. Damped waves:

Type B. Waves composed of successive series of oscillations the amplitude of which, after attaining maximum, decreases gradually, the wave trains being keyed according to a telegraph code.

SEC. 2. In the above classification, the presence of a carrier wave is assumed in all cases. However, such carrier wave may or may not be transmitted.

This classification does not contemplate exclusion of the use, by the administrations concerned, under specified conditions, of types of waves not included in the foregoing definitions.

EXTRACTS FROM RADIO REGULATIONS

ANNEXED TO THE INTERNATIONAL TELECOMMUNICATION CONVENTION

(Atlantic City, 1947)

ARTICLE 42²—AMATEUR STATIONS

SECTION 1. Radiocommunications between amateur stations of different countries shall

be forbidden if the administration of one of the countries concerned has notified that it objects to such radiocommunications.

SEC. 2. (1) When transmissions between amateur stations of different countries are permitted they must be made in plain language and must be limited to messages of a technical nature relating to tests and to remarks of a personal character for which, by reason of their unimportance, resource to the public telecommunications service is not justified. It is absolutely forbidden for amateur stations to be used for transmitting international communications on behalf of third parties.

(2) The preceding provisions may be modified by special arrangements between the countries concerned.

SEC. 3. (1) Any person operating the apparatus in an amateur station must have proved that he is able to transmit, and to receive by ear, texts in Morse code signals. Administrations concerned may, however, waive this requirement in the case of stations making use exclusively of frequencies above 1000 (one thousand) Mc/s.

APPENDIX 3
TABLE OF FREQUENCY-BAND WIDTHS OCCUPIED BY THE EMISSIONS

The frequency bands necessary for the various types of transmissions, at the present state of technical development, are indicated below. This table is based solely upon amplitude modulation. For frequency or phase modulation, the band widths necessary for the various transmissions are many times greater.

Type of transmission	Total width of the band in cycles for transmission with 2 side bands
A0. Continuous waves, no signaling.	
A1. Telegraphy, pure, continuous wave. Morse code. Baudot code. Stop-start printer.	Numerically equal to the telegraph speed in bauds for the fundamental frequency, 3 times this width for the 3d harmonic, etc. (For a code of 8 time elements (dots or blanks) per letter and 48 time elements per word, the speed in bauds shall be equal to 0.8 times the speed in words per minute.)
Scanning-type printer.....	300-1,000, for speeds of 50 words per minute, according to the conditions of operation and the number of lines scanned (for example, 7 or 12) (Harmonics are not considered in the above values.)
A2. Telegraphy modulated to musical frequency.	Figures appearing under A1, plus twice the highest modulation frequency.
A3. Commercial radio telephony.	Twice the number indicated by the C. C. I. F. opinions (about 6,000 to 8,000). ¹
Broadcasting.....	15,000 to 20,000.
A4. Facsimile.....	Approximately the ratio between the number of picture components ² to be transmitted and the number of seconds necessary for the transmission.
A5. Television.....	Approximately the product of the number of picture components ² multiplied by the number of pictures transmitted per second.

¹ It is recognized that the band width may be wider for multiple-channel radiotelephony and secret radiotelephony.

² Two picture components, one black and one white, constitute a cycle; thus, the modulation frequency equals one-half the number of components transmitted per second.

(2) Administrations shall take such measures as they judge necessary to verify the qualifications, from a technical point of view, of any person operating the apparatus of an amateur station.

SEC. 4. The maximum power of amateur stations shall be fixed by the administrations concerned, having regard to the technical qualifications of the operators and to the conditions under which these stations must work.

SEC. 5. (1) All the general rules of the Convention and of the present Regulations shall apply to amateur stations. In particular, the transmitting frequency must be as constant and as free from harmonics as the state of technical development for stations of this nature permits.

(2) During the course of their transmissions amateur stations must transmit their call sign at short intervals.

² "Objects" is used here in the optical sense of the word.

³ Article 42 of the Radio Regulations annexed to the International Telecommunication Convention (Atlantic City, 1947) becomes effective on January 1, 1949 at which time it supersedes Article 8 of the General Radio Regulations, Cairo Revision, 1938).

Rev. 2-15-49
8 6 7 8 0

NOTICE

This form should be completed and forwarded to the Federal Communications Commission, Washington, D. C., and upon receipt of same, any amendment to this Part of the Rules and Regulations adopted after the date of this publication will be mailed to the addressee indicated, except as noted below.¹

Part No. _____

Effective date _____

Revised date _____

Name

Address

City

State

All new rules and amendments to the Rules and Regulations adopted by the Federal Communications Commission are also printed in the Federal Register and are available in this form for reference or use by interested parties.

¹ Purchasers of this part will be advised where a particular amendment may be obtained, including the cost, if not available from the F. C. C.

(Cut on this line)

The first of these is the fact that the
British Government has been unable to
bring about a settlement of the
Irish question. This is due to the
fact that the Irish people are
not satisfied with the present
arrangement of the country.

The second of these is the fact that the
British Government has been unable to
bring about a settlement of the
Irish question. This is due to the
fact that the Irish people are
not satisfied with the present
arrangement of the country.

The third of these is the fact that the
British Government has been unable to
bring about a settlement of the
Irish question. This is due to the
fact that the Irish people are
not satisfied with the present
arrangement of the country.

The fourth of these is the fact that the
British Government has been unable to
bring about a settlement of the
Irish question. This is due to the
fact that the Irish people are
not satisfied with the present
arrangement of the country.

The fifth of these is the fact that the
British Government has been unable to
bring about a settlement of the
Irish question. This is due to the
fact that the Irish people are
not satisfied with the present
arrangement of the country.

The sixth of these is the fact that the
British Government has been unable to
bring about a settlement of the
Irish question. This is due to the
fact that the Irish people are
not satisfied with the present
arrangement of the country.

The seventh of these is the fact that the
British Government has been unable to
bring about a settlement of the
Irish question. This is due to the
fact that the Irish people are
not satisfied with the present
arrangement of the country.

The eighth of these is the fact that the
British Government has been unable to
bring about a settlement of the
Irish question. This is due to the
fact that the Irish people are
not satisfied with the present
arrangement of the country.



